Contents Volume 234 July 2001

Volume 234 No. 1

Physiological variation among native and exotic winter annual plants associated with microbiotic crusts in the Mojave Desert
L.A. DeFalco, J.K. Detling, C.R. Tracy and S.D. Warren **1–14**

The effect of the presence of a forage legume on nitrogen and carbon levels in soils under *Brachiaria* pastures in the Atlantic forest region of the South of Bahia, Brazil
R. Tarré, R. Macedo, R.B. Cantarutti, C. de P. Rezende, J.M. Pereira, E. Ferreira, B.J.R. Alves, S. Urquiaga and R.M. Boddey **15–26**

Impact of elevated CO_2 on soil organic matter dynamics as related to changes in aggregate turnover and residue quality
J. Six, A. Carpentier, C. van Kessel, R. Merckx, D. Harris, W.R. Horwath and A. Lüscher **27–36**

Root length and diameter measurement usin NIH Image: application of the line-intercept principle for diameter estimation
K. Kimura and S. Yamasaki **37–46**

Zinc influences nodulation, disease severity, leaf drop and herbage yield of alfalfa cultivars
H.S. Grewal **47–59**

Assessment of the biochemical composition of oilseed rape (*Brassica napus* L.) ^{13}C-labelled residues by global methods, FTIR and ^{13}C NMR CP/MAS
I. Trinsoutrot, L.J. Monrozier, J. Cellier, H. Waton, S. Alamercery and B. Nicolardot **61–72**

Aluminum resistance in two cultivars of *Zea mays* L.: Root exudation of organic acids and influence of phosphorus nutrition
A. Gaume, F. Mächler and E. Frossard **73–81**

Mineralization of soil organic P induced by drying and rewetting as a source of plant-available P in limed and unlimed samples of an acid soil
C.K. Chepkwony, R.J. Haynes, R.S. Swift and R. Harrison **83–90**

Phosphate acquisition heterosis in *Arabidopsis thaliana*: a morphological and physiological analysis
R.A. Narang and T. Altmann **91–97**

Development of ectomycorrhizas in model beech–spruce ecosystems on siliceous and calcareous soil: a 4-year experiment with atmospheric CO_2 enrichment and nitrogen fertilization
V. Wiemken, K. Ineichen and T. Boller **99–108**

Nitrogen limitation in mycorrhizal Norway spruce (*Picea abies*) seedlings induced mycelial foraging for ammonium: implications for Ca and Mg uptake
G. Jentschke, D.L. Godbold and B. Brandes **109–117**

Effects of high- and low-intensity fires on soil properties and plant growth in a Bolivian dry forest
D.K. Kennard and H.L. Gholz **119–129**

Potassium nutrition effects on seed alkaloid concentrations, yield and mineral content of lupins (*Lupinus angustifolius*)
P. Gremigni, M.T.F. Wong, N.K. Edwards, D. Harris and J. Hamblin **131–142**

Volume 234 No. 2

Bauxite residue sand has the capacity to rapidly decrease availability of added manganese
M.J. Gherardi and Z. Rengel **143–151**

Comparison of laboratory- and field-derived soil water retention curves for a fine sand soil using tensiometric, resistance and capacitance methods
K.T. Morgan, L.R. Parsons and T. Adair Wheaton **153–157**

Selective plant growth suppression by shoot application of soil bacteria
R. Weissmann and B. Gerhardson **159–170**

Nutrient limitation along a productivity gradient in wet meadows
H. Olde Venterink, R.E. van der Vliet and M.J. Wassen **171–179**

Ion exchange properties of plant root cell walls
N.R. Meychik and I.P. Yermakov, **181–193**

Plant species effect on the spatial patterns of soil properties in the Mu-us desert ecosystem, Inner Mongolia, China
M. Hirobe, N. Ohte, N. Karasawa, G.-s. Zhang, L.-h. Wang and K. Yoshikawa **195–205**

Growth response of coffee tree shoots and roots to subsurface liming
L.A. Rodrigues, H.E.P. Martinez, J.C.L. Neves, R.F. Novais and S.M. Mendonça **207–214**

Interaction of lime, organic matter and fertilizer on growth and uptake of arsenic and mercury by Zorro fescue (*Vulpia myuros* L.)
D.A. Heeraman, V.P. Claassen and R.J. Zasoski **215–231**

Soil physical conditions in a New York orchard after eight years under different ground-cover management systems
M.T. Oliveira and I.A. Merwin **233–237**

Development of nitrogen mineralisation gradients through surface soil depth and their influence on surface soil pH
K. Paul, S. Black and M. Conyers **239–246**

Response of 19 *Azolla* strains to a high concentration of ammonium ions
K. Maejima, S. Kitoh, E. Uheda and N. Shiomi **247–252**

Effect of temperature on growth and nitrogen mineralization of fungi and fungal-feeding nematodes
H. Okada and H. Ferris **253–262**

Volume Contents **263–265**

Author index **267**

Instructions for Authors **269–275**